

# (12) United States Patent

### Panescu et al.

US 9,510,905 B2 (10) Patent No.:

(45) **Date of Patent:** \*Dec. 6, 2016

(54) SYSTEMS AND METHODS FOR HIGH-RESOLUTION MAPPING OF TISSUE

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(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-

claimer.

(21) Appl. No.: 15/179,891

Filed: Jun. 10, 2016 (22)

**Prior Publication Data** (65)

> US 2016/0278857 A1 Sep. 29, 2016

# Related U.S. Application Data

Continuation of application No. PCT/US2015/ 061353, filed on Nov. 18, 2015.

(Continued)

(51) **Int. Cl.** 

A61B 18/12 (2006.01)

A61B 18/14 (2006.01)

(Continued)

(52) U.S. Cl.

CPC ...... A61B 18/1492 (2013.01); A61B 5/0538 (2013.01); A61B 5/6858 (2013.01);

(Continued)

(58) Field of Classification Search

CPC ...... A61B 18/1492; A61B 2018/00761;

A61B 2018/00797; A61B 2018/00678; A61B 2018/00714; A61B 2018/00642; A61B 2018/00577; A61B

2018/00702

See application file for complete search history.

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#### (57)ABSTRACT

According to some embodiments, methods and systems of enhancing a map of a targeted anatomical region comprise receiving mapping data from a plurality of mapping electrodes, receiving high-resolution mapping data from a highresolution roving electrode configured to be moved to locations between the plurality of mapping electrodes, wherein the mapping system is configured to supplement, enhance or refine a map of the targeted anatomical region or to directly create a high-resolution three-dimensional map using the processor receiving the data obtained from the plurality of mapping electrodes and from the high-resolution roving electrode.

## 20 Claims, 14 Drawing Sheets

